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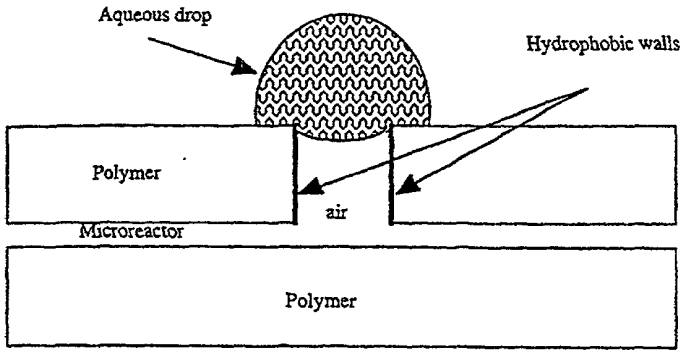
(54) Title: MICROSCALE TOTAL ANALYSIS SYSTEM

(57) Abstract

The invention relates to an apparatus for performing chemical assays in an aqueous medium. The apparatus contains a reaction chamber(s) and a liquid in–flow channel connected to each chamber. The flow of liquid through the fluid in–flow channel to the reaction chamber is controlled by the presence of a hydrophobic inner surface on the walls of the in–flow channel. Under normal conditions fluid will not flow through the channel. However, application of an external force pushes the liquid through said channel into the reaction chamber. The invention is applicable to the monitoring of many different molecular interactions, in particular molecular recognition between an immobilised affinity partner and a species in solution, such as immunoglobulin/antigen interaction, DNA hybridisation, haptamer–protein interaction, drug and virus detection, high throughput screening of synthetic molecules and for determining the concentration and reaction kinetics of target species.



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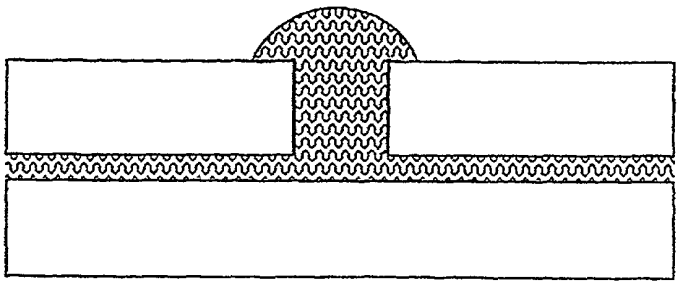

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